

What is claimed is:

1. A process for removing an endotoxin from recombinantly produced proteins comprising a Lipopolysaccharide (LPS)-protein complex comprising the steps of:
  - immobilizing the complex to an chromatographic resin;
  - washing the resin with an alkanediol whereby at least a portion of the LPS is separated from the complex; and,
  - eluting at least a portion of the protein from the resin.
2. The process of Claim 1 wherein the alkandiol is selected from the group consisting of 1,5-pentanediol, 1,6-hexanediol, 1,2-hexanediol, 1,2-butanediol, 1,4-butanediol, and 1,7-heptanediol.
3. The process of Claim 1 wherein the resin is selected from the group consisting of a cation exchange resin and an anion exchange resin.
4. The process of Claim 1 wherein the protein is selected from the group consisting of bovine albumin (BSA), bovine holo-transferrin, lactoferrin, lysozyme, and heat shock proteins.
5. The process of Claim 1 wherein the protein is affixed to the resin.
6. The process of Claim 1 wherein the LPS is affixed to the resin.
7. The process of Claim 1 wherein greater than about 95% of the protein eluted from the resin is free of LPS or other endotoxin.
8. The process of Claim 7 wherein a change in pH or conductivity is used to elute the protein from the resin.
9. The process of Claim 1 wherein the protein is produced from a bacterial expression system.

BEST AVAILABLE COPY

10. The process of Claim 9 wherein the bacterial expression system is selected from the group consisting of an *E. coli* expression system, a *Caulobacter crescent* expression system, and *Proteus mirabilis* expression system.
11. The process of Claim 1 wherein the resin is in a high salt environment.
12. The process of Claim 11 wherein the alkanediol is 1,2-hexanediol.
13. The process of Claim 12 wherein the protein is eluted by changing the pH.
14. A process for separating an endotoxin from a protein comprising the steps of affixing the protein to a resin and washing the resin with an alkanediol whereby at least a portion of the endotoxin is separated.
15. The process of Claim 14 wherein the endotoxin is an impurity created from the production of the protein.
16. The process of Claim 14 wherein greater than 99.9% of the endotoxin is separated from the protein.
17. A process for removing an endotoxin from recombinantly produced proteins comprising a Lipopolysaccharide (LPS)-protein complex comprising the steps of:  
affixing the protein of the complex to a cation exchange chromatographic resin;  
washing the resin with an alkanediol whereby at least a portion of the LPS is separated from the complex; and,  
eluting at least a portion of the protein from the resin by either changing the pH or the conductivity.
18. The process of Claim 17 wherein the LPS of the complex is affixed to an anion exchange chromatographic resin.

BEST AVAILABLE COPY